

CLAIMS

We claim:

- 1 1. A method for reconstructing an integrated circuit package comprising:
2 attaching a die to exposed wire bond pads of a lead frame so that the die is
3 electrically connected to the lead frame; and
4 encapsulating the die and the wire bond pads in an encapsulant; and
5 reshaping an upper surface of the encapsulant where at least a portion of the
6 encapsulant reshaping is performed by a lapping process.
- 1 2. A method according to claim 1, wherein lapping is performed by an
2 abrasive or ablative lapping process.
- 1 3. A method according to claim 1, wherein lapping is performed by a
2 mechanical, chemical, or electromagnetic lapping process.
- 1 4. A method according to claim 1, wherein encapsulating the die and the wire
2 bond pads results in the encapsulant having a convex or concave an upper surface,
3 and reshaping the encapsulant results in the encapsulant having a planar an upper
4 surface.
- 1 5. A method according to claim 1, further comprising marking the reshaped
2 upper surface of the encapsulant.
- 1 6. A method according to claim 1, wherein the reshaped upper surface of the
2 encapsulant is sufficiently flat to permit labeling by printing, photolithographic or
3 mechanical marking techniques to simulate a production transfer molded
4 encapsulated IC package, the method further comprising marking the reshaped
5 upper surface of the encapsulant.

1 7. A method according to claim 1, wherein lapping is performed using a laser
2 or another source of electromagnetic radiation.

1 8. A method according to claim 1, wherein lapping is performed using a
2 planar abrasive surface.

1 9. A method according to claim 1, wherein lapping is performed using a
2 planar abrasive surface attached to a wheel or belt.

1 10. A method according to claim 1, wherein lapping is performed using a
2 planar abrasive surface sufficiently large to permit more than one package to be
3 lapped at the same time.

1 11. A method according to claim 1, wherein lapping is performed by chemical
2 etching.

1 12. A method according to claim 1, wherein lapping is performed using a gas-
2 jet or liquid-jet containing a particulate material.

1 13. A method according to claim 1, wherein lapping is performed via a
2 mechanical grind.

1 14. A method according to claim 1, wherein lapping is performed using a
2 combination of mechanical and chemical ablation.

1 15. A method according to claim 1, wherein lapping is performed using a
2 combination of mechanical and electromagnetic ablation.

1 16. A method according to claim 1, wherein lapping is performed using laser
2 ablation.

- 1 17. A method according to claim 1, wherein lapping is performed using a
2 combination of electromagnetic and chemical ablation.
- 1 18. A method according to claim 1, wherein lapping is performed by impinging
2 an ultra-fine particulate using a high pressure gas-jet against the material to be
3 lapped.
- 1 19. A method according to claim 1, wherein lapping is performed by impinging
2 an ultra-fine particulate under high pressure against the material to be lapped.
- 1 20. A method according to claim 1, wherein lapping is performed by delivering
2 a pulsating liquid-jet under high pressure against the material to be lapped.
- 1 21. A method according to claim 1, wherein lapping is performed by plasma
2 etching.
- 1 22. A method according to claim 1, wherein lapping is performed by a
2 pressurized liquid against the material to be lapped.